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LEADING ARTICLES

TOURING THE LANDS WHERE MEDICAL SCIENCE EVOLVED.

SECOND PAPER.

ROBERT G. ECCLES, M. D.

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[FOR THE MEDICAL FORTNIGHTLY.]

CHRISTIAN AND SARACEN.

IN my last letter Pergamos and Cos were referred to as places where the doctrines of Esculapius had taken deep root. In this communication it is necessary, for the proper understanding of our subject, to once more recall them and emphasize the fact that we have here not medical men to deal with, in the modern sense, but a religious body. At the time these two places were at their best Esculapianism was the religious cult of the people and the curing of the sick was then held to be evidence of the real divinity of Esculapius. The priests were believed to bring to the sufferers the relief they sought through the miraculous power given them by the god which they represented. The evolution of medicine, then, as a science, chiefly depended upon the mental development of the religious priesthood to a point where they were able to take the advantage of physical forces in bringing about their cures. As long as there was little or no religious rivalry there could be little or no stimulation to excel in curing power. At the beginning of our era such rivalry arose and our last communication left the reader at the point of early contact between the contending creeds. Upon each devolved the necessity of proving the influence they had upon nature as given to them by supernatural agencies. We have already seen how, under Hippocrates, the Asclepiades were verging toward a scientific system. Five hundred years after his appearance a new stimulus arose and met his disciples face to face in both Cos and Pergamos.

We learn from the Acts of the Apostles that St. Paul preached in Cos and in Samos. He had likewise churches established in Ephesus and Smyrna. The last named place is less than fifty miles from Pergamos. About an hour after our ship left Samos, on our way to Cos, we came in sight of an island the name of which must be quite familiar to all readers of the MEDICAL FORTNIGHTLY. That island is Patmos, where St. John wrote the book of Revelations. He was a prisoner there when he wrote it and his opposition to the Greek and Roman gods, of which Esculapius was one, caused his incarceration on this, then, penal island. It lies nearly midway between Pergamos and Cos, a few miles from Samos, and somewhere near thirty-five miles from Ephesus. In the first chapter of the book of Revelations St. John mentions the names of the seven churches of Asia giving Pergamos, Smyrna and Ephesus as three of them. In the second chapter he tells the church at Pergamos that they dwell "at Satan's seat." Concerning the Esculapian habit of sacrificing fowl and cattle to the god of healing and eating the edible part of such sacrificed animals he says: "I have a few things against thee, because thou hast there them that hold the doctrine of Balaam, who taught Balac to cast a stumbling-block before the children of Israel, to eat things sacrificed unto idols." He held that the ways of the people of Pergamos, in this particular, were the same as those that had been condemned at the time of Balaam and that they should be opposed. We see by this attitude that there was no attempt at compromise between the Christians and the pagans in matters of faith. For the reviling of the gods the Christians were compelled to suffer, as did Socrates long before their

*The first chapter of this series of letters, "Grecian," appeared in the Medical Fortnightly, issue of October 10, 1908.

appearance. Pergamos was then the chief center of Esculapean education—the seat of their university,—and hence was called by St. John "Satan's seat." It was here that Claudius Galen acquired the first part of his medical and surgical education, and here that he was born. Beginning his surgical work in the great circus of his native city he soon discovered that his knowledge of anatomy was insufficient for him to do such work properly and so we soon find him leaving Pergamos and going to Alexandria, in Egypt, to learn more. Priests of all kinds —Roman, Grecian, Christian and Mohammedan—have all condemned dissecting. In Alexandria had arisen a school opposed to all religions, and it not only tolerated, but encouraged dissecting. It was this Egyptian freedom that led the parents of Jesus to take him there and so protect him from Herod. Galen's studies in Egypt made him master of the situation, and the greatest physician and surgeon of his age, as well as converting him into the leading medical authority of many succeeding centuries. It is quite likely that Pergamos and Alexandria had been closely linked, as medical centers, from the time that Marc Antony gave the Pergamos library, of two hundred thousand volumes, to Cleopatra to be transferred to the Egyptian capital. This act of Antony's may have been an indirect influence that made such a man as Galen possible at that early period.

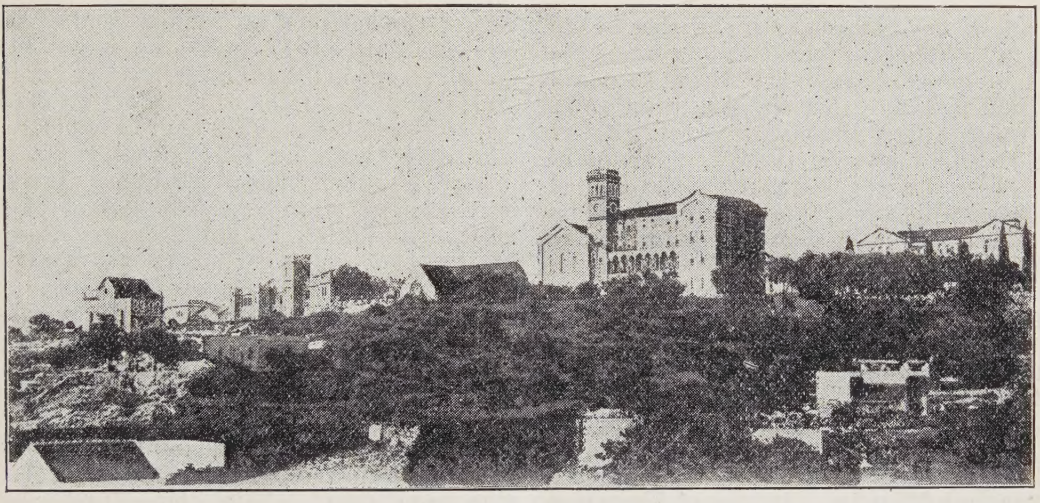
What Galen has been to scientific medicine St. Paul has been to the spread of Christianity, but St. Paul preceded Galen by about a century. The principal medical authority among the followers of Esculapius, at the time of Paul, was Celsius, of Rome. It took about a hundred years of religious conflict for the struggle between Chritsianity and Greek mythology to produce the scepticism toward the latter, that evolved Galen. Without that conflict there would have been no serious decline in a belief in the gods. Without it there would have been no toleration of dissecting and particularly the dissecting of human bodies. Without it Galen would never have been permitted to vivisect animals and acquire his knowledge of physiology. In extinguishing the fires upon the shrines of Apollo and the other Olympian deities, the preaching of Paul forced progress upon a too conservative world. Let us then follow for a while the career of St. Paul.

After our ship passed Cos it made directly for Beirut, passing on the way the important islands of Rhodes and Cyprus. On reaching Beirut we were permitted to go ashore, in defiance of all precedent, at an hour long after medical inspections of incoming vessels usually occur. To our surprise, the table mates with whom myself and wife had become acquainted during the voyage, were no less personages than the new governor of Palestine, his first wife and children. Their freedom to land at that late hour gave the same freedom to all first class passengers. With them was also the son of the Turkish governor of Syria. No one on board had suspected that the pleasant little woman to whom we had been permitted to speak was the "forbidden one" of the highest representative of the Sultan in the Holy Land. She had removed all signs of being a Turk, cast aside the restrictions of the harem, and appeared in Christian costume, without even an excuse for a veil. Before going ashore, however, she was so closely veiled that no one could have told her to be the same person. Next morning, after landing at Beirut, we had the pleasure of going the rounds of the American College, its hospital wards, its lecture rooms in both pharmacy and medicine, and seeing something of its dispensary service. Here is a bit of American civilization, with American teachers and American preachers, planted at the base of the Mountains of Lebanon. We were guests at the home of one of the professors, so had a competent guide and friend to show us around. But we could not stay long here as we had to hurry on to Baalbeck and Damascus.

The railway ride through the mountains of Lebanon is a delightful one. The ascent of the mountains, from Beirut, is particularly fine. At Baalbeck we saw the great temple of the sun and the huge monoliths which its walls contain. They are probably the largest hewn stones in any building in the world. One extremely large one still lies, unfinished, in the quarry at the other end of the city from the temple. The Arab natives at Baalbeck, and in the region between that and Damascus, reminded us, at every turn, of Mochi, Navajo, and Pueblo Indians. The resemblance in their houses got more and more pronounced as we proceeded so that just before reaching Yahfoufah it became startlingly so. Had we been brought there blindfolded it would have been difficult for us to persuade ourselves that we were not on a Santa Fe train somewhere between Albuquerque and Williams. The flat-topped houses, cliff-edged houses, step-formed houses, absence of chimneys, ladders by which to get into the houses by way of the roofs, adobes, mud ovens, brilliant costumes, and the color of the people all evoked the suggestion.

As we neared Damascus we were made aware of our being now in the ancient home

of Abraham, the original source of the peach, the almond, and the damson plum. The river we were so frequently crossing was the Abana of the Bible. At last we reached what is probably the oldest, still living, city on our planet. As we threaded its narrow streets we felt as if we were at last in the land of the Arabian Night's entertainments and might at any minute meet Ali Baba on his way home from a robber's cave. Before Bagdad became the seat of the caliph this city had that honor, so that here grew the original spirit of Bagdad the real home of Ali Baba. Here Mohammedanism flourished when at its period of quickest growth. Here Mohammed's daughter and two of his wives died and are buried. Here St. Paul was converted to Christianity,



AMERICAN MEDICAL COLLEGE AT BEIRUT, SYRIA.

became the "apostle of the Gentiles," and after escaping from here carried the gospel to all the chief countries that worshiped Apollo and Esculapius. Here the medical aphorisms of the Mohammedan physician Serapion—otherwise known as John of Damascus—were written. Here, in our own age, Buckle, the first of evolutionary historians, died and was buried. Within a few steps of his grave, and near to where tradition says Paul was converted, is the place where, in 1860, the Mohammedans massacred over 50,000 Christians, in cold blood. Within the walls of the city is the celebrated "street called Straight," and around it are the bazaars that are the delight of every tourist when he first visits the place. The covered streets permit of marketing in all kinds of weather. The divisions of these streets into regions of special business, permits of easy shopping. Blocks of space are devoted exclusively to saddlers. Still other blocks only contain shoemakers. Then there is the reigon for the carpenter, the region for the green grocer, the region for the coppersmith, the region for the bookseller, the region for the silk dealer, the region for the dealer in silverware, the region for cotton goods, the region for hardware, etc., etc. No where else on earth is this dividing off of business carried to such perfection. In the region of second-handed goods is a subregion for old clothes that is known to everybody as the "Louse Bazaar." The city contains about 200,000 people, and yet there is no delivery of mail. The same divisions that characterize businesses are found in nationalities. Jews, Syrians, Arabs, Franks, Germans, English, Turks, Egyptians, and Italians have each a special region of the city in which to live. A letter addressed to John Brown, Damascus, will be sent to the British postoffice by the letter sorter. There Mr. Brown will call and get it, or the porter of his hotel will get it for him. Nothing more is needed on a letter than the name of the man, or woman, and of the city. If it is an Arab name it is sent to the Arab postoffice, if French to the French postoffice, and so on to all the other offices. If a doctor is wanted one can be found quickly in any part of the European section, while in the Asiatic they are scarce.

If we visit the tombs of great persons, or the mosques, we will soon discover that the masses of the people pin their faiths more to prayers and magic than science, when they are ailing and want to be cured. In all of these will be found offerings from the sick, from a torn piece of garment to a

model limb. Each has been placed there along with a prayer or a superstitious invocation of a magical character. Although there are a number of great names, among ancient Saracenic medical men, none of them were orthodox Mohammedans and all of them were but echoes of Galen or Hippocrates. This is why Damascus has given to the world little of direct value to medicine. Its indirect effects will appear as our story develops. Like Paul, after his conversion, we did not tarry long in Damascus, but proceeded at once to Jerusalem. On our return to Beirut, in order to take ship for Jaffa, we met many tourists whose fate forbade their visiting the Holy Land. The coast at Jaffa being strewn with huge jagged rocks will permit of no landings when there is even a moderate gale blowing. There is no landing place for ships and row boats are frequently knocked into splinters upon the rocks. These tourists had been in sight of Jaffa, desiring to land, yet their ships had to carry them away with nothing better than a distant view of the coast. Some of them had come all the way from the United States, with Jerusalem as their chief objective point, but they were not permitted to get there. We were much more fortunate. Our ship passed in full view of Tyre, Sidon, Acre and Haifa, hugging the coast all the way because the fineness of the weather permitted it.

This is the region of frequent storms, and it was here that Jonah won his bad reputation, and was made food for a whale, because of the tempests that he brought on the ship he was travelling in. It was at Tyre that "Barbarossa" died and was buried in 1190 A. D. For him the ship in which we crossed the Atlantic was named. Christ and St. Paul both preached in Tyre, Hiram, king of Tyre, supplied Solomon with the cedars from Lebanon used in the building of the temple.

As we passed in sight of Acre we were reminded of the fact that this was the headquarters of the crusaders during the time of Richard, the lion-hearted, of England, and the refuge of the Knights of St John when the Saracens took Jerusalem. We spent several hours at Haifa where we went ashore and walked the streets to which the boy Jesus must frequently have come from the nearby town of Galilee.

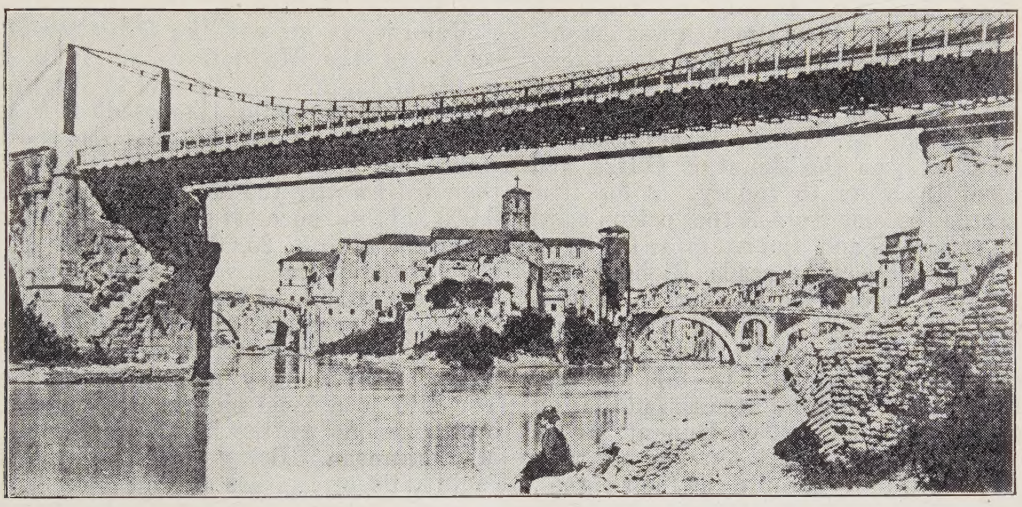
Mount Carmel, at whose foot Haifa lies, is the place where Elijah performed the miracle of drawing down fire from heaven and where he slew the priests of Baal. It was in the neighboring village of Galilee where the last supper was eaten and in which Christ brake bread and gave it to his disciples.

In going to and from our ship at Haifa, Beirut, and Jaffa, we learned that the Arab refrain sung by the boatmen meant expressions like: "Allah is good and will strengthen our arms;" "The Eternal One is kind and will help us pull;" "Thou giver of all blessings carry us safely;" "Thou calmer of the waves let no storm overtake us;" "Oh Allah, thou art our strength and the rock of our defense."

As we went ashore at Jaffa we remembered that it was from here that St. Peter sailed when going on his mission to Rome, and it was here that Napoleon Bonaparte was charged with poisoning plague victims, so that they should not be able to spread infection among his soldiers. The distance from Jaffa to Jerusalem is 54 miles. We reached the latter place at 5 p.m. and put up at the New Grand Hotel, on Mount Zion. As it was the 24th of December we immediately made arrangements for a carriage to take us and our guide to the Church of the Nativity, at Bethlehem. This church is built immediately over what is believed to be the manger in which Christ was born. We left Jerusalem at 9 p. m. for this trip of twelve miles. As we left Mount Zion, passing out of the city, we observed to the east the planet Jupiter, shining with unusual brilliancy, because of the clear, dry atmosphere of that country. As we got nearer to Bethlehem it kept rising in the sky and when we reached the church it was immediately over our heads. The coincidence was most striking. Here it was the anniversary of the very night that the Magi followed a star to this same spot. This star—Jupiter—was named after the Roman god of gods. We stopped at the well of the Magi on our way and reached Bethlehem at the same hour they are supposed to have got there. The Church of the Nativity is divided into two parts, one being used by the Greek church, and the other by the Roman Catholic. Both were more than crowded by a surging mass of worshipers. Bishops and priests swung censors, went over extensive ceremonials and at, or after midnight betook themselves to the crypt below the church, where the manger—now converted into an altar—is situated. Lining the entire way, from church entrance to manger were two dense lines of Turkish soldiers with rifles, fixed bayonets, and heavily loaded cartridge belts. Between these the processions of priests were compelled to go bearing the image of the infant Christ, the crucifixes, the emblems of the sacrament, etc. The entire floor of the crypt was covered by kneeling figures busy telling beads and praying. Most of them were women and many of them nuns. A

narrow space was kept clear for the procession to pass. The Greeks got through their services first so had the first right of way to the manger. The Roman Catholics followed and had the pleasure of seeing the soldiers prodding the dallying Greek priests so as to hurry them out of the way of the second procession. Before these soldiers were placed here, on Christmas eves the conflicting Christians frequently met in deadly conflict contesting each other's right to first descent. Now the Mohammedan soldiers keep the peace. All the worshippers, on passing the manger, bow, cross themselves, use the holy water there provided, and utter prayers as they proceed. With such a crowd present the air was, as might be expected, stifling. At the close of the ceremonies we returned to Jerusalem, see the many stations where Christ is supposed to have performed certain acts while bearing his cross, and inspect what is left of Solomon's stables and the places from which Christ is said to have driven the money changers. In our hunt for places connected with the evolution of medicine we did not forget to visit the Muristan, or Hospital of the Knights of St. John of Jerusalem, and the tombs of the prophets, where is supposed to lie the remains of Ezekiel who wrote the memorable words: "This is Jerusalem; I have set it in the midst of the nations."

While looking through El Aksa we did not forget that from this spot came the sentimental veneration we have, as American doctors, acquired for the Red Cross. It is a spot likewise venerated by Free Masons, for



ROME: ISLAND AND TEMPLE OF ESCULAPIUS.

and just as we passed into our hotel the city chimes rang out 3 o'clock in the morning.

Seeing Jerusalem is taking a most thoroughly comprehensive lesson in Bible history. Every street, every corner, every hill, every spring, every church, every valley, every gate, every mosque, every hospital, and almost every object one meets is replete with historical connections. Myth and fact are so closely intertwined that it would not be possible for any person to fully separate them. There are places the tales told of which are evident fables while there are others the facts of which are fully attested and of undoubted verity. Every tourist is sure to visit the Mount of Olives, look off in the south and west where lie the Jordan River and the Dead Sea, enter the Garden of Gethsemane, pass through the Valley of Jehosaphat, make a careful inspection of the Mosque of Omar and the Mosque El Aksa, here stood that part of the Temple of Solomon where the Knights Templars took their rise. While the historical continuity between the ancient Knights Templars and the modern ones is entirely broken, the sentimental connection is binding, even if the former did misbehave. From them came the red cross—the symbol of blood and destruction—while the Knights of St. John gave us the white cross as a symbol of healing and of Christian charity. These two classes of knights fought the Saracens together, but it was the latter and not the former who gave us hospitals and dispensaries, surgery and nursing. The former were soldiers only, but the latter added to the function of the soldier that of nurse, surgeon, physician and friend. What is left of the Muristan stands near the Church of the Holy Sepulcher. Charlemagne founded a monastery on this spot, but in

1048 it was sold to some merchants of Amalfi who converted it into a hospital. So much good did it accomplish that rich Christians from many countries helped it financially, and out of it grew the order of Knights to which reference has been made. It was not long before the flower of European youths, including even princes of royal blood, took upon themselves the vows of this order and rallied to the defence of Christ against the Saracen and to the caring for the sick and wounded. They established hospitals at most of the large seaports of Christendom so as to care for pilgrims on their way to the Holy City. During the period of the crusades no other organization rendered such valiant service either in the field of battle or on the march. Godfrey of Bologne became a patron of the order, although himself a Knight Templar. During his reign, as king of Jeruaslem, their strength was materially increased. At the taking of Jerusalem, during the first crusade, both classes of knights stood side by side in the siege. It was then that St. George is supposed to have appeared, on the Mount of Olives, and beckoned them on to victory. After that St. George became fixed as the patron saint of the crusaders and the red cross the symbol. In the second crusade Richard, the lion hearted, paved the way for the choosing of that same symbol as the flag of England and the taking of St. George is the patron saint of England. In this way that particular color of cross became familiar on the battle field, and when Dunant Henry established his organized nursing corps its popularity led to its adoption as their signal. In spite of its utter inappropriateness for such uses as it is now being put to, it has probably come to stay, and no amount of protest will be likely to get rid of it. Its original meaning has become almost completely reversed, just as the original wearers of it, who had sworn fealty to the Christian cause, came in time to execrate and spit upon it as part of their initiation ceremonies. The tragic ending of the order seems to have made the sign they wore the more revered, and has placed it above the much more appropriate white cross, of the Knights of St. John. The latter body, after an existence of nearly 1,000 years, is today in charge of the British Ophthalmic Hospital of Jerusalem with Dr. W. E. Cant as its chief surgeon.

During the millenium of their existence they have had a most eventful career. To their efforts we owe so much—indirectly—for the advancement of medical science that it will probably be long before the debt will be fully acknowledged. Had they done as much in a direct manner, so that children could have been able to see the connection, the acknowledgment would have been made long ago. Tossed, as they were, by Saracenic power to Margat, to Acre, to Cyprus, to Rhodes, to Crete, and finally to Malta, with deeds of bravery marking them at every turn, they acted as the brake upon the wheels of Mohammedanism that held that power back from its self-imposed task of trying to force Islam on Europe. Their defeat at Rhodes is the defeat in all history of which it has been said, "Nothing in the world has been so valiantly lost as Rhodes." Their long possession of Malta, and the fact that it was on this same island that St. Paul was wrecked, induced me to turn aside from the direct route marked for myself, in order to see this queer little gem of the Mediterranean.

Malta is, at present, the Gibraltar of the center of the Mediterranean. It is England's stronghold on its way to Egypt and India. The capital of the island is Valette, a city built by the knights on the spot where they had one of the most severe of all their battles with the Mohammedans. Then 2,000 knights successfully beat back 40,000 Saracens killing 25,000 of them. At the close of the battle only 600 knights were left who were capable of bearing arms. The day before the enemy retired they all expected to be killed. In honor of La Valette, their Grand Master, they named the new city. The site is a most picturesque one and it overlooks one of the finest harbors in the Mediterranean. Being built in the 16th century its streets are narrow and occupying, as it does, the side of a hill they are rather steep. Many of the buildings, and particularly the cathedral, are very fine, but the Military Hospital is spoken of as "the glory of Malta." The club houses, or Aubreges were magnificent, but are now converted into public buildings. At the time of knight rule every patient in the hospital had two beds, a wardrobe of his own, and only two patients were put into a single ward. They were waited upon by "serving brothers," their food served on solid silver dishes, the most costly wines supplied, except when forbidden by the medical attendant, their appetites coaxed with expensive viands, and their every wish anticipated. These luxuries have now departed, but the large, airy rooms still make excellent resting places for "Tommy Atkins" when sickness overtakes him. The former residence of the Grand Master is now the Governor's Palace, and in its museum can be seen the mailed coats of armor, the bows, the arrows, the swords, and the flint guns of those old

times. The walls of the rooms are hung with the rich and costly tapestries that have not been removed. On floors and walls are many marble mosaics that attest the splendor in which these Knights lived. Perhaps the most surprising feature of Valette is the fine stores and rich supplies of merchandise seen in its chief business street. To leave any of the surrounding Italian, Greek, or African cities and to visit this is to feel as if one had left the middle ages and dropped into New York or London. The people, of course, look different and their habits are different, but the lavish display of fine goods and plate glass windows is a reminder of Broadway. The women are certainly quite different from London or New York women, inasmuch as they all dress in the garb of nuns. From the beggar woman of the street appealing for alms, to the finest lady in embroidered silk, they are all enveloped in large black veils, hooded over the tops of their heads and extending down to their always black skirts. These nunly costumes are a relic of knightly times when "mother superiors" and "sisters" set the styles for Valette. In the neighboring city of Citta Vecchia, that is almost in the center of Malta, the ladies do not adhere so strictly to this style of dress. A trip there is a unique experience as the intervening country is quite unlike anything one can see elsewhere. It is all divided up into small plots, and as every plot is surrounded by a cobble-stone fence the impression received is that of a huge, but now abandoned, quarry.

As one looks off toward the sea, from the highest point in Citta Vecchia, the scene is very impressive, and in looking northward, in the direction of St. Paul's Bay and Gozo Island, the guide reminds us of Ulysses having been detained by wily Calipso in the latter, while shipwrecked Paul was cast ashore in the former. The guide is always sure to take the visitor into the catacombs, where the early Christians hid from their Roman persecutors, and then to the excavations where exceedingly handsome mosaic floors have been unearthed, that attest the splendor of the Carthagenian homes that were here long before the time of Paul. But Rome subdued Carthage and Paul was on his way with a message destined to subdue Rome. Had that message been confined exclusively to matters of the soul it would not have been considered in this narrative. Most people are apt to forget that early Christianity started as a gospel of medicine as well as a gospel of religion. Owing to its medical aspect our interest must, for a while, center upon St. Paul. Jesus, the New Testament tells us, came "healing every sickness and every disease among the people." He commanded his disciples to heal the sick. In quoting the old proverb of "physician heal thyself" he applied it to himself, and thus impliedly assumed this title. He referred to the brazen serpent of Moses as typical of himself, and thus assumed as his own the same symbol that had long represented the cult of Esculapius. Luke, prior to adopting the Christian faith, was a physician, and hence either a disciple of Pythagoras or of Hippocrates. Paul and Peter, the two chief messengers of Christ to Rome, were both healers of the sick. All of the Christian apostles were priest-physicians. As the gospel according to Apollo and Esculapius had long preceded these men to Rome it is apparent that a srtuggle for existence was sure to arise, and that the result would be either the total suppression of one or the other, or some sort of compromise would occur. Facts indicate that the latter happened. It is not at all probable that either Peter or Paul were able to foresee the far-reaching consequences of their visits to Rome. No more did Paul foresee that his preaching was to cause the merchants of Amalfi to establish in Jerusalem a hospital that would finally make all Europe—indeed we might say all the world—debtors to him, nor that the forces that did this should center upon the very island upon which he was wrecked. In following him to Rome let us turn aside, on the way, and look at Amalfi and the region immediately around it. The circuit generally pursued by tourists, in going to see Amalfi, constitutes what is probably the finest short tour upon the earth. It is one continuous panorama of loveliness and wonder, from the time of leaving Naples till the return to Naples again. Who has not seen this has not seen the ne plus ultra of astonishing sights and of grandeur. The Blue Grotto, at Capri, is alone worth a trip to Italy to see. The pearly blue lustre of the salt-water within the cave, its fairy-like splendor and suggestiveness of liquid fire when it is struck by the oars or splashed by a bather, is a wonderful sight. Then there is the magnificent view from the Villa Tiberius, with the accompanying thought that this was the home of the Caesar who ruled Palestine when Pontius Pilate, his representative, gave up Jesus to the rabble for crucifixion. But who can describe the carriage drive from Sorrento, through Amalfi, to Salerno, or who adequately describe Pompeii, Herculaneum, and Vesuvius? Every step of the way is not only indescribably grand, but is all a mass of petrified history. How could Columbus have found his way to

America, or Vasco de Gama to India, had not Amalfi given us the mariner's compass, as it likewise gave us the Knights of St. John? What would modern medicine have been had the University of Salerno not rekindled the fire—almost an extinguished fire of medical education? Where would our latest researches in biology have come from had the aquarium at Naples not initiated the new dispensation of experimental biology? Yet the inspiring influences that, step by step, led up to these is clearly traceable to Rome. "All roads," we have been told, "lead to Rome," and it is quite certain that all suggestions and all cures of the middle ages that paved the way to modern methods of thought, once had their home in Rome.

We have already referred to the pestilence which occurred in Rome, in B. C. 291, during which embassadors were sent to Delphi where the oracle told them to go to Epidaurus for succor. It was then they carried one of the serpents, that were common in the grove of Esculapius, to Rome as the representative of the god of healing. When the ship arrived in Italy the serpent was carried to an island of the Tiber, in Rome, where a temple of Esculapius was built in commemoration of the event. Ovid tells us that after the "salutary serpent" reached Rome the plague subsided and,

> "Now no more the drooping city mourns;
> Joy is again restored and health returns."

At the time St. Paul reached Rome the Esculapean temple of health stood upon the Insula Aesculapii where the Church of St. Bartholomew now stands. This island was constructed in the form of a ship, a tall obelisk in the centre represented the mast, the hospital wards on the sides were the cabins, and in the bow there was placed a duplicate image of that of Escalapius at Epidaurus. Parts of the travertine bulwarks are still shown within the monastery garden of St. Bartholomew and numerous votive offerings, in the form of terra cotta limbs that have been dug up there, are on exhibition. As has already been stated the chief representative of the cult of Esculapius at Rome, on the arrival of Paul, was Celsius. Nero's physician, at the time Paul was beheaded, must have been Andromachus.

He was, perhaps, the first of the so-called Archiaters, or royal healers. Following him came Popular Archiaters or public health officers. They were paid certain sums by the city besides having special regions reserved for them to practice in and where no other healer was permitted to take cases. Visitors to Rome always go first to see the splendid monument of St. Peter's—the glory of the Roman Catholic Church. Not so many go to see Santa Paulus, on the Way of Ostia, that is supposed to mark the site of St. Paul's grave. In some respects it is more interesting than St. Peters. When, under Nero, these two messengers of Christianity were martyred who could have foreseen that the principles they had planted in that city were destined to control it and its empire and that such splendid monument's would be erected to their memories?

But the parts of their teaching that have survived are not the medical. It was less than a century after their deaths that Galen came and laid the seed that long after developed along the lines of true progress. It was necessary, however, that much of the superstition of the Esculapians should be destroyed and its destruction came about through the friction in thought between it and Christianity. Mohammedanism came in at a little later date giving a triple conflict. Wars and pestilences followed and these tested the value of the respective claims and kept testing them long after the name of Apollo was forgotten. As the sequel will show a large amount of Greek superstition still survives in the public mind, owing to its having been adopted by monks, knights, and priests, all over Christendom. Even to this day, in Ireland, in Spain, in Italy, in Russia, in Greece, in Austria, in Turkey, and in Syria, one can find votive offerings hung around tombs, churches, holy wells, shrines, and abbeys, while the practice of incubation is still perpetuated in many Christian countries. Sir T. Clifford Allbutt has recently said, "The history of medicine, broadly speaking, is melancholy reading; it is a record of devastation by pestilence, deplorable blights upon family life, and catalogues of medical formulas and practices as prodigious as the plagues before which priest and physician alike vaunted themselves in vain." Bad as it is it would have been much worse but for the conflict of opinion which arose through the struggles of rival religions in whetting thought and encouraging the proving of all things and holding fast that which, on trial, turned out to be of value:

> "For all of good the past hath had remains to make our own time glad,
> Our present daily life sublime, and every land a Palestine."

[To be continued]

THE average man who applies to a doctor cares but little what you call his disease if you tell him you can cure him. But if you find that he is really diseased be wary of giving assurance of a cure unless you are confident he will "take his medicine."

EDUCATION AND ORGANIZATION IN THE WAR ON TUBERCULOSIS.*

GEORGE HOMAN, M. D.

ST. LOUIS.

President Missouri Association for the Relief and Control of Tuberculosis.

Mr. President, Ladies and Gentlemen:

On such an occasion as this when taking up for presentation and consideration for however brief a time the subject of human tuberculosis—or, speaking more narrowly, consumption—and the means by which it may be overthrown, the impression often haunts the mind of the medical speaker that he is telling a thrice-told tale, indulging in a recital of threadbare common places that are already a part of the stock of common knowledge; but, while this feeling may often linger in the mind of a speaker upon the present topic, still human experience shows that it is only by dint of continuous repetition, by constant harping on a theme, by damnable iteration if you please, that truths which should be widely known for the welfare of the race become part and parcel of the familiar thought of the individual of whom it is convenient to speak as the average man or woman. So, if any part of what is spoken here tonight concerning tuberculosis has to anyone, who is not of the medical profession, a threadbare or shopworn sound it is to be taken as evidencing the fact that the lessons taught by the work begun and carried on by physicians in this behalf within the present generation are finding lodgment in the general consciousness with hopeful promise that this form of knowledge will spread with ever-increasing speed until the question of consumption shall no longer be a puzzle or problem even to the plainest citizen, and the malady itself be shorn of power to destroy, and sent to join those vanishing plagues that were in their day and time the terrors of the human race.

Tuberculosis, as an infection, is the most nearly universal and widespread agency of disability and death known to man, and it must follow as a self-evident truth that knowledge of how it spreads and the means by which it may be baffled and destroyed must needs be as wide and universal as the disease itself.

If it is an undisputed fact that the coughing consumptive spitting right and left in public and private places thus broadcasts the disease to his fellows then he must be persuaded on the ground of the common safety to desist therefrom; for if my neighbor may not morally or legally endanger my life or health with dagger, bludgeon or pistol, nor by even the threat of such weapons, neither should he be permitted the opportunity to do so through his diseased expectoration; for while human vengeance and violence have slain their thousands in homicidal assault, consumption has slain its tens of thousands with this significant difference, that whereas the attack by felonous means is usually open to scrutiny, and the results are usually compassed within hours or days, the time of assault by tuberculosis cannot be definitely fixed, while the fatal ending may not be reached for years, between which Alpha and Omega are many distressing periods of languishing and pain, of alternating hope and despair.

Experience tends to show that the law of nature respecting the aggressions of tuberculosis toward the ordinary person, even amidst the artificial conditions of modern life, in brief, are about as follows:

In the case of such a person subject to every day exposures in infected places it may be presumed that his native and acquired powers of vital resistance are such that he is able, in say ninety-nine times out of one hundred, to defeat the invading tuberculosis germ received either by breathing or swallowing, but such exposures in civilized life are so very numerous that at the one hundredth time, perhaps because of a weakened resistance due to a temporary cause, a firm lodgment of the infection is achieved and tuberculosis as a disease becomes established.

Therefore the common sense hygiene of the disease presents the two plain propositions, namely, on the one hand to guard with the utmost strictness against every possible source of infection; and, on the other, to maintain at the highest point the powers of defense in every individual member of the community.

How can these two fundamental requirements be completely met? Plainly by education to intelligently recognize the danger, and organization to effectually overcome it, and these considerations lead up to the purposes of such a gathering as this.

Education may go before organization or the latter may be used as a means to promote the former. In this State after some preparatory work by and through the medical profession it was decided to organize the Missouri Association for the Relief and Control of Tuberculosis which was formed at Jefferson City in May, 1907, and then duly incorporated under the law, the purposes being summed up in the statement "to do all things and acts having as their

*An address delivered before the Business Men's Club at Webster Grove, Mo., December 14, 1908.

object the relief of those afflicted with tuberculosis and the control and prevention of that disease throughout the entire State."

With your permission I will quote from some remarks made by me at a meeting of the St. Louis County Medical Society, at Clayton, November 28 last, as follows:

"In order to effectually accomplish this end the association desires to extend its influence and work by means of branch societies into every county, and through these branches to carry on a form of popular education on prevention by teaching the manner and ways in which this disaese is spread among people, as well as domestic animals.

"The agencies or channels by and through which it is designed to spread this information are the churches, clubs, lodges, colleges, schools, etc., the means of conveyance being by lectures, talks, literature, exhibits, lantern demonstrations, and the like.

"The purpose of these local bodies also is to keep in as close touch as possible with the local medical societies, and to co-operate with the local health authorities in the detection and removal of conditions that favor disease, directly or indirectly. They will be in a position to show that as consumption is spread by the carelessness or ignorance of persons thus diseased through spitting, etc., that local ordinances should be passed placing a penalty on such offenses committed in public places; that institutions at public expense should be provided where those who are without means, and in the advanced stages, could be cared for and the public thus protected; that open air colonies, camps, and sanatoriums be established where the early cases could be taught how to get well and keep well; that dispensaries be provided where those having homes, but who are of scanty means, could be advised and treated, and the tuberculous bony deformities of spine, hip and joints in children be guarded against.

"It is the hope of the Missouri Association that the General Assembly at its coming session will be able to see its way clear to extend financial aid to forward this work, either in the form of a special commission or by means of a special appropriation to the credit of the State Board of Health accompanied by instructions to that body to extend active co-operation and help to the end that through the State body and its branches the work of popular enlightenment respecting the prevention and cure of tuberculosis, as herein merely outlined, may be pushed to successful completion and the bane and burden of this oppressive disease lifted rom the State."

The time for organization and work in this line throughout St. Louis county is ripe, the occasion is here, the need is pressing and it is believed that the present opportunity will be embraced, and that a society which shall prove to be second to that of no other county in the State in energy, intelligence and practical resource will be the reasonable outcome and realization of this most hopeful and encouraging assemblage of the interested and progressive citizenship of Webster Groves and St. Louis County.

THE Surgeon-General Public Health and Marine Hospital Service reports that from July 21 to December 4 there were four cases of plague in Californa, with three deaths. The last case reported was at Los Angeles, August 11.

NOT SO REMARKABLE!—The medical profession of a Pennsylvania town expressed surprise that a boy who got hurt in an accident continues to live with half a brain. Still, ordinary dilligence in research these days can locate a considerable number of people who have lived their allotted threescore and ten without betraying external evidences of having any gray matter at all. —Birmingham News.

APPENDICITIS; FIRST OPERATION.—The practical unanimity existing among surgeons at the present day with regard to the treatment of suppurative, or ulcerative, appendicitis, with or without abscess, by prompt operation and removal of the diseased appendix, has been brought about by the efforts chiefly of American surgeons, and the courageous pioneer in this remarkable work was the late Dr. Thomas G. Morton, for many years on the surgical staff of the Pennslyvania Hospital. On February 28, 1887, Dr. Morton performed an operation for Dr. E. R. Stone, of Philadelphia, upon a woman suffering with abscess, in which the appendix was found to be extensively diseased. Recognizing the patient's peril he ligatured the appendix at its base and removed with success. About two months later, April 23, 1887. Dr. Morton, in consultation with Dr. Frank Woodbury and Dr. James C. Wilson, diagnosed a case in the Pennsylvania Hospital as appendicitis and removed the diseased appendix. The patient was a yonng business man of Philadelphia, who made a complete recovery. This was the first case recorded of appendicectomy, deliberately undertaken for the removal of a diseased appendix and antedates the McBurney (New York) case by nearly one year.—Phila. Inquirer.

BYRON ROBINSON'S NOTE-BOOK.

Medicine is a combination of science, art and rationalism.

The physician's duty is to diagnose the disease and treat the patient. Mind and matter belong to the physician's domain.

The doctor is short lived. He lives an irregular physical life and a strenuous tensioned mental life.

Sodium chloride especially stimulates the epithelia of the kidney and that of the tractus intestinalis.

Na cl clarifies the urine and increases its quantity.

The proximal ureteral isthmus is the greatest landmark in the ureter. It averages about one-twelfth of an inch in diameter, posseses thick fibrous walls and acts as a kind of ureteral sphincter. It is the real neck of the ureter—the narrowest point of the urinal duct. It obstructs over 50 per cent of ureteral calculus. It is liable to flexion, torsion resulting in hyrdo-ureter.

The ducts and vessels of the body possess spirality—many to a marked degree. The ureter possesses 1½ spiral rotations. The oviduct is similar in spirality. The blood vessels, especially the utero-ovarian, the facial, the temporal and splenic, present marked spirality. The philosophy of this spirality of ducts is still unsolved.

For over a decade I have said that the diagnosis of pancreatitis is almost exclusively made at the autopsy. At present I see no reason to change my mind. I have witnessed hundreds of autopsies at which the pathologists declared after longitudinal section of the pancreas—negative. The pancreas is the least diseased of all the abdominal viscera.

How can anesthesia be improved? By cultivation through specialists.

Tuberculosis follows slight trauma because there is slight congestion only.

Tuberculosis does not follow violent trauma because the consequent profound congestion destroys the germs—blood cures disease.

I believe more cases of perityphlitis would recover in the United States if operation was not imposed than do at present with excessive operations. The mortality of amateur operators in perityphlitis is terrific.

I make the same statement in regard to ectopic pregnancy that I do in regard to perityphlitis. Surgeons have gone mad.

THE MEDICAL FORTNIGHTLY

Issued Tenth and Twenty-Fifth of Every Month.

Edited By
DR. THOS. A. HOPKINS

And the Following Associates:
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ROBT. H. DAVIS, M. D., Dermatology.
W. E. FISCHER, M. D., Ophthalmology.
R. B. H. GRADWOHL, M. D., Pathology.
A. F. KOETTER, M. D., Oto-Laryngology.
O. E. LADEMANN, M. D., Internal Medicine.
W. H. VOGT, M. D., Gynecology.
O. H. BROWN, M. D., Tuberculosis.

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EDITORIAL

A Doctor's Symphony.

It is no light thing, this entering a new year, and however lightly we may speak of New Year's resolutions they are good things to have made and *kept*. Our readers have already made their formal resolutions, and had they not we would have hesitated to have been specific in our recommendations relative thereto, our dominating thought at this time has been of our relation to our fellow man; how peculiarly intimate is our relation to our fellow man how beneficial or harmful this intimacy may be made. Beyond all other men physicians should recognize their responsibilities, be strong in the face of weakness and bold to the help of timidity, but always kind, reasonable, helpful, tolerant, in a beneficial sense.

Our good friend Dr. Geo. F. Butler has expressed what is our wish for our readers far better than we could have done, and we feel that you will appreciate the following reproduction:

"A DOCTOR'S SYMPHONY.*

"With this New Year resolve to live without anger, avarice, envy and littleness. Resolve to be generous liberal and kind; to recognize the extreme value of health and human life and to strive by every means to call back the tide of disease and death; to give something to shape the million-handed labor to an end and outcome that will leave more sunshine and more flowers to human kind. Let your labor be so ordered that in future times the loved ones may dwell longer with those who love them; open your minds; exalt your souls; widen the sympathies of your hearts; face the things that are now as you will face the reality of death—fearless and alone. Remember that the battle of life cannot be fought by proxy; be your own helper.

*Copyrighted by Geo. F. Butler, M. D., 1908. Dedicated to the Medical Profession.

Go thou alone—
Let not thy courage fail,
Nor weight of pain avail
To stay thy onward feet.
What e'er betide thee sink not
E'en in thy anguish think not
Under God's generous sun
So much of sorrow lives save goodness to complete.

Go thou alone—
Though friends and fortune pass
Beyond thee, and alas
Love's visions fade away,
Look to the stars and ponder
How poor thou art, and wonder
How the vast undertone
Of thy creative thoughts could blossom in a day.

Go thou alone—
The breathing atom in thee
Shall one day rise divinely
From this its cradled head.
Be wise and brave and loving,
From lowliest essence moving
In circlets one by one
Up to thy perfect shape, the highest earthly power."

Election Results of the St. Louis Medical Society.

THE annual election of the St. Louis Medical Society is now a matter of the past and those who are pleased, those who believe that the will of the majority is right and those who disprove are now expressing themselves; it is fortunate that the majorities of the elected officers were so decisive in character, and it is unfortunate that the society contains a member who will predict disaster in the face of such a splendid expression. The society is to be congratulated on the strength of the men elected, and while we will not say that it is not a mistake to elect to the council or as delegates men who have expressed themselves as not wishing to undertake the work which such election means, the society has spoken and it is to be hoped that there may be few or no resignations and that the work of the new year may be undertaken with united enthusiasm.

The following are the election results:

President, C. M. Nicholson.

Secretary, Carroll Smith.

Members of the Council: Geo. Homan, C. E. Burford, R. M. Funkhours, H. C. Dalton.

Delegates to the Missouri State Medical Association: W. W. Graves, J. H. Amerland, John C. Morfit, Geo. Homan, T. A. Hopkins, H. L. Nietert, G. C. Crandall, V. P. Blair.

Alternates: P. Y. Tupper, Walter Baumgarten, W. C. G. Kirchner, M B. Clopton, W. E. Sauer, F. J. Tausig, H. W. Soper, Jesse S. Meyer.

The proposition to increase the yearly dues to $10.00 was defeated, 261 to 163.

The complete returns follow:

FOR PRESIDENT.

C. M. Nicholson	248
R. E. Schleuter	188

and a small vote for Drs. T. A. Hopkins, Henry Swartz and Hugo Summa.

FOR SECRETARY.

Carroll Smith	288
C. A. Vosburgh	144
R. Wobus	5

FOR THE COUNCIL.

Geo. Homan	287
C. E. Burford	268
R. M. Funkhouser	266
H. C. Dalton	209
A. G. Schlosstein	181
H. W. Bewig	167
Chas. Shattinger	167
H. J. C. Sieving	145

and a scattering vote for nine members.

DELEGATES.

W. W. Graves	268
J. H. Amerlaud	252
John C. Morfit	239
Geo. Homan	226
T. A. Hopkins	226
H. L. Nietert	204
G. C. Crandall	203
V. P. Blair	200
L. H. Hempelmann	191
A. F. Loetter	189
John Green, Jr	186
A. H. Meisenbach	186
E. A. Babler	183
W. H. Stauffer	168
L. M. Warfield	163
E. O. Greer	154
Kennedy	6

Nine others, 1 vote each.

ALTERNATES.

P. Y. Tupper	298
Walter Baumgarten	294
W. C. G. Kirchner	294
M. B. Clopton	246
W. E. Sauer	233
F. J. Taussig	220
H. W. Soper	216
Jesse S. Myer	205
R. H. Fuhrman	203
John Zahorsky	201
John McH. Dean	192
George Gellhorn	165
A. C. Kimball	162
E. P. Porterfield	150
R. P. Scholz	146
E. G. Seelig	131

Splanchnoptosia is a functional disease—visceropexy is not its panacea.—Robinson.

Missouri's Tuberculosis Sanatorium.

THERE is no one of Missouri's recent ventures along humanitarian and health lines which should command such encouragement and co-operation from the medical profession as should the sanatorium at Mt. Vernon for the treatment of incipent tuberculosis. The location of this institution is ideal, its management and control is in a high degree efficient and scientific, and the institution has passed the stage of being an experiment. It is our belief that the hospital with its present limited capacity should be open only to the poor. We have heard the statement that inmates who are able to pay are required to pay for treatment, and we feel that the question of ability to pay should be settled in the negative before the patients are received. The institution is altogether too small to accommodate the poor for whom it was constructed, and there should be no further crowding to make room for those who can afford to enter private institutions. But the fact that others than the poor desire accommodation there, is a gratifying testimonial to the work that is being done with an incomplete group of buildings, and with a rather inadequate revenue. The State of Missouri has undertaken a great work and one which must be seen through, the means must be forthcoming, and in so far as the individual physicians and medical societies of the state have influence with the members of the State Legislature, that influence should be brought to bear to the early completion of the Missouri Sanatorium and its conduct with no anxiety on the part of its officers as to ways and means. Were the buildings of the group completed and equipped today they would make a very imposing showing and would accommodate a large number of patients, but is safe to say that every bit of available space would be occupied within two or three months; this clearly shows how much it is needed. That the tide has turned, and there is a gradually decreasing mortality from tuberculosis is a fortunate fact, not only is a discharged patient a credit to the institution, but he is a general benefactor in that the hygienic teachings which he disseminates are more telling in the fruit which they bear than advice along the same line from physicians. The sanatoriums of the country are playing an important role in the betterment of the tuberculosis outlook and we in Missouri have abundant reason to feel gratified with the accomplishments of ours, but we want it speedily completed and fully equipped; we want no short appropriations or hold-up appropriations; it is one of the most important of the state's undertakings and must be done right.

The Annual Meeting of the St. Louis Medical Society.

THE annual meeting of the St Louis Medical Society has usually been an occasion of report reading and president electing, a majority of the membership leaving as soon as that officer was elected and allowing the few of the faithful who remained to elect the other officers; our present very excellent method of election eliminates that feature entirely. The official reports this year were more than usually interesting and to the point. A most interesting and unique feature was the part played by the Projectoscope, which was ably manipulated by Dr. O. A. Wall. Through the ingenuity and skill as well as the kindness of his two daughters, some fifty slides had been prepared, many of them of real artistic value. The first five were the faces of the members who had died during the year: Drs. Leudeking, Gamble, Orr, Laidley and Bartscher. Dr. W. G. Moore spoke feelingly of their finished lives. Following these a brief review of the good year's work was thrown on the screen, and later some exceedingly clever caricatures of a few of the well-known and popular members of the society. These were all eloquently commented upon by Dr. Moore in his inimitably chosen and well rounded sentences. After the last slides showing the result of the election, the society enjoyed a delightful smoker and social hour, being, as on several former occasions during the year, the guests of the president, Dr. Herman Tuholske.

Stricken Italy.

THE world has been appalled at the frightful calamity which came to Italy since our last issue. The killed, the injured and the homeless are so many that the work of relief seems almost beyond the possibility of successful carrying out, even though all civilized nations are participating in it. The St. Louis profession is interested and is contributing through the committee of its society. The following call was issued by the committee:

To the Medical Profession of St. Louis:

The calamity which visited Southern Italy December 28th last through earthquake, shock, tidal-wave and fire, entailed such

destruction of life and property that the needs of the afflicted survivors are of the most pressing nature, demanding instant measure of relief in the way of food, clothing and other necessaries of life.

In order to extend aid in this direction, the St. Louis Medical Society appeals to the medical profession of this city for a generous response in behalf of the sufferers. A committee has been formed for this purpose, and contributions you may be pleased to give should be sent to the chairman, who will promptly acknowledge same. "He who giveth quickly giveth twice."

When the fund is closed a full accounting will be made to the contributors.

HERMAN TUHOLSKE,
Chairman and Treasurer,
4495 Westminster Place.
MEYER WIENER, Sec'y.

ST. LOUIS ITEMS.

DR. R. C. PREWITT has removed his office to the Metropolitan Building.

DR. C. M. NICHOLSON has lately returned from a vacation trip to Cuba.

DR. W. M. C. BRYAN has removed his office to Suite 18-20 Linmar Building.

DR. C. E. BURFORD has removed his offices to 835, 836 and 836a Century Building.

DR. HOWARD KELLY, of Baltimore, spent a few hours in St. Louis last week while enroute for Mexico, where he is going for a brief time of recreation.

SEVERAL local physicians have a trip to Mexico under contemplation, the trip to include attendance at the International Medical Association of Mexico at Tampico.

THE Antikamnia Calendar for 1909 reached us late in December; like its predecessors it is both artistic and useful. We understand that copies have been sent to the profession very generally.

THE annual dinner of the Medical Society of City Hospital Alumni is to be held at Faust's Cabin on the evening of January 7th. The society is planning to make this a more than usually important occasion and is urging all members to participate.

MR. GEORGE W. BRECKINRIDGE, of San Antonio, has established eight scholarships of two hundred dollars each for women at the University of Texas. The scholarships are available to all women qualified to enter the medical department of that institution.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

BACKBONE. Hints for the Prevention of Jelly-spine Curvature and Mental Squint. Collected from various sources by S. DeWitt Clough, Ravenswood, Chicago. Bound in artistic paper. Chicago: The Clinic Publishing Co., Ravenswood. (Price fifty cents the copy.)

This little book is one of the really clever compilations of the Christmas season just past, the work of compilation and some of the contributions are from a man who can see that the sun shines, and he has drawn from writers who are aware that the world moves and that they are not the only people on its surface. It is just the book for the pocket and to pass on when read, it is just the book for the waiting-table, though it will be certainly carried off by the first reader who gets interested and has not been delayed sufficiently to finish. It is just the book to buy in dozen lots and give to your friends—for the betterment of the world we live in.

A TEXT-BOOK OF PHYSIOLOGY. For Students and Practitioners. By George V. N. Dearborn, A. M. (Harvard), Ph. D., M. D. (Columbia), Professor of Physiology in Tufts College, Medical and Dental Schools, Boston. Octavo, 550 pages, with 300 engravings and eight colored plates. Philadelphia and New York: Lea & Febiger, 1908. (Cloth, $3.75 net.)

It is a great pleasure to find a writer on the subject of Physiology who does not take it for granted that his readers know it all before he begins. There are few of the standard physiologies which are not so intensely technical that they are difficult reading even for those who are supposed to have mastered the subject; such works multiply difficulty for the already overworked student. Professor Dearborn has given us a physiology which is understandingly readable, and consequently intensely interesting, yet he has failed to present no subject and to do so in a manner to please the most exactingly scientific reader.

A book of this character presents little opportunity for picking out points of special excellence or interest; the best that can be said of it is that it is of uniform excellence throughout, and that is certainly a fact. Physicians who have tried to brush up on physiology and have found their texts too deep for them will find this a happy exception, and will find the volume a valuable addition to their library.

ESSENTIALS OF REFRACTION. By Thos. G. Atkinson, M. D., author of "Applied Physiology;" Associate Professor of Physiology and Neurology, American College of Medicine and Surgery, Chicago. Chicago: G. P. Engelhard & Co. (Price $1.25.)

Every physician, whether he devotes his attention to ophthalmology or not, should be acquainted with the eye, and should have some definite knowledge of refraction. The itinerant optician is a reflection on the

medical profession which would not exist did we take the little time and do the little study which would fit us to work more intelligently and successfully than they do. Atkinson's Refraction is one of the practical little volumes which can be made to put money into a physician's pocket, and at the same time tremendously relieve suffering. It is also a volume to be read with benefit by the city practitioner, the specialist and the student.

THE EXPLOITS OF A PHYSICIAN DETECTIVE. By Geo. F Butler, M D., Professor and Head of the Department of Therapeutics and Professor of Clinical Medicine, Chicago College of Medicine and Surgery. Chicago: Clinic Publishing Co., 1410 E. Ravenswood Park, 1908.

Those physicians who have read Dr. Butler's numerous scientific writings know that he possesses great literary ability. "Love and Its Affinities" and "The Isle of Content," not to mention other contributions, showed a broader purpose than his strictly medical works had led us to expect; and now we find him entering a new literary field and doing it to the great credit of our profession. The Exploits of a Physician Detective are planned somewhat along the lines of Poe and Dr. Doyle, but except that they remind us of these stories, there is no other thought of anything but originality. The series of stories, each complete in itself, engages the same principal characters, and no one of the series but shows the hand of a master in its conception. The book is one which will especially interest doctors, though it is intended and suited to general readers. The psychologic aspect of the several cases is splendidly worked out and is very instructive, while each story is so interesting as to hold the attention as only the better class of detective stories can.

PUBLISHERS' ANNOUNCEMENT.—E. B. Treat & Co., medical publishers, New York, announce, in press, for early publication, the following works:

SURGICAL DISEASES OF CHILDREN. A Modern Treatise on Pediatric Surgery, by Samuel W Kelley, M.D., Professor of Diseases of Children, Cleveland College of Physicians and Surgeons. This volume occupies a distinct place in medical literature as it is devoted entirely to the surgical diseases of children and is the first yet written by an American on the subject. The author's special training amply qualifies him for the present work. An attractive and most instructive feature is the more than 300 illustrations, mostly of the author's own cases, under which are full descriptions, thus forming little clinics in themselves. Octavo, 720 pages, over 300 illustrations, cloth, express paid, $5 00 net.

PTOMAINE POISONING. A Concise Exposition of the Etiology, Bacteriology, Pathology, Symptomatology, Prophylaxis, and Treatment of Bacterial Food Poisoning, by Prof. Dr A. Dieudonne, Munich. Translated and edited, with additons, by Dr. Charles Frederick Bolduan, Bacteriologist, Research Laboratory, Department of Health, City of New York. 8vo, 125 pages, cloth, prepaid, $1 00 net.

DIAGNOSIS AND TREATMENT OF DISORDERS OF THE BLADDER, with Technique of Cystoscopy, by Follen Cabot, M.D., Professor Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, New York. A manual of this phase of surgery supplementing the more pretentious volumes. 8vo, 225 pages, 40 illustrations and 1 colored plate, cloth, prepaid, $2.00 net.

MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

THERAPEUTICS.

E. S. MCKEE, M. D.

Wood Cure for Chronic Constipation.—Bluemland Ulrich (Klin. Therap. Wooh.) recommends very highly a wheat bread in which ground wood, commonly known as excelsior has been added, in the proportion of 50 grammes to 750 grammes of dough. Birch is the best wood for this purpose. The bread will not differ in appearance and taste from ordinary bread. The mechanical irritation of the cellulose and the chemical stimulus of the gases, formed by the wood in the intestines, did much to cure the constipation. Excellent results were reported in 80 cases. Constipation can be cured by removing the cause and the chief causes of chronic constipation are lack of exercise, diet poor in residue, and habitual suppression, resulting eventually in a motor and nervous insufficiency of the intestines.

Moist Applications of Aluminum Acetate.—Wetlauer (Klin. Therap. Wochenschrift) praises this solution, which is also known as Burrows' solution. He uses them quite frequently after operations where there is the least danger of infection. The solution is also invaluable in the mouth, particularly for necrosis and suppuration, where it does more good than mouth washes. He finds an excellent method of treating tears of the perineum after confinement is to apply gauze saturated with this solution and have the patient lay on her abdomen. Liquor alumini acetatis, N. F., is composed of the following: Aluminum sulphate (U.S.P.), 300; acetic acid (U.S.P.) 300; calcium carbonate 130, water 1000 cc. Dissolve the calcium carbonate in the acetic acid mixed with 250 cc. (8 oz.) of water and the aluminum sulphate in 750 cc. (24 oz.). Mix the solutions and allow the mixture to stand for 24 hours, agitating occasionally Then pour off the clear solution and filter. The solution contains about 8 per cent of basic aluminum acetate. It is practically identical with the liquor alumini acetatis of the German Pharmacopeia.

Epsom Salts in Ivy Poisoning.—Sulphate of magnesium is found to have apparently specific powers in this condition. Cloths are wrung out from a hot saturated solution of the salt and applied under air tight coverings. This is repeated three or four times daily, according to the severity of the case. The modus curandi is not yet clear.

Hoarseness.—Ten drops of dilute nitric acid three or four times a day in sweetened water is recommended for this condition by Ellingwood. Singers and public speakers will find this an excellent remedy. If immediate benefit is required three or four drops on a square of loaf sugar and allow to dissolve on the tongue slowly, drawing the air into the lungs over it.

Haines' Test for Sugar consists of the following formula:

℞ Cupri sulphatis..... 2.00
Glycerinae..... 15.00
Aq. dest..... 15.00
Sol. potassii hydroxidi (5%).150.00

Treatment of Coryza by Ammonium Carbonate.—Beverly Robinson in the New York Medical Journal finds this remedy to give the greatest satisfaction in the effort to abort a case of acute coryza and with the least possible objection. He gives a grain to the dessertspoonful with some flavoring agent, and repeats this dose every hour for twelve doses. For the next twelve or twenty-four hours he gives the remedy every two or three hours. If the attack is not aborted in forty-eight hours it is unnecessary to continue the treatment. If the ammonium carbonate is continued too frequently and too long it becomes a notable depressant of the circulation, and sometimes occasions unpleasant symptoms of cardiac disability of a temporary nature. He sometimes substitutes the aromatic spirits of ammonia for the carbonate in twenty drop doses every two hours, diluted with water, but it is not so efficacious as the former. Ammonium carbonate and also the aromatic spirits eliminate themselves from the body through the nasal mucous membrane, and are thus useful locally. It is probable that they modify favorably the pituitary, it is also probable that not infrequently they prove fatal to the microbes, which are clearly present at times, and which are doubtless connected as a factor causative with the inception of acute coryza. I have come to regard ammonium carbonate as nearly a specific in the treatment of acute coryza when it is used soon enough, repeatedly and in suitable doses. It does fail, but the failure is due to its not being used early enough and in accordance with the precise manner indicated.

Prevention and Treatment of Coryza.—Dr. W. H. Spurgin, of New Castle on Tyne, writes of his experience with coryza. Himself and his father before him were martyrs to the disease. He found it best to wear light all wool underclothing; avoid close heated and fetid rooms as much as possible; never wear mackintoshes, unless a light one over an overcoat for driving or motoring. No muffler. Take a cold bath daily, hot one for cleansing, sponging off with cold water standing in hot water. Common sense diet. Little alcohol and tobacco. He gets his colds invariably by either getting really chilled or sweating. Treat with aspirine gr. v, quinine gr. ii, every three hours. Of course attack the fiend vigorously from the start. After breaking up the cold follow up with ammonia and quinine. A menthol, boric salicylic snuff is very beneficial.

The Ultraviolet Ray and High Frequency Currents in Neurasthenia.—Sinclair Tousey of New York (Med. Rec., Dec. 5, 1908) says that the ultravioletray is produced in much greater concentration by electrical apparatus than in nature. The incandescent light is preferable as a source of this ray. In electric baths the rays are absorbed by the skin, producing a general tonic effect. The visible rays penetrate the tissues and stimualte metabolism in the blood, lymph, and solid tissues. Radiant heat is still more active by eliminating products of autointoxication. It is followed by sleep. The ultraviolet rays in connection with high frequency currents produce ozone which penetrates the tissues, increases the rapidity, and favors the completeness of oxidation. The higher tension discharges are especially useful in neurasthenia with low arterial tension, and the low tension high frequency discharges in neurasthenia with high arterial tension. The author reports two cases treated in this way.

Snow White Liniment.—Physicians' Drug News recommends the following for a snow white liniment: Castile soap powdered, 3.35; cotton seed oil, 24.00; aqua ammonia (U. S. P.) 24.00.; turpentine, 8.00; gum camphor, 2.00. Mix the soap with cotton seed oil in a perfectly dry bottle, add the aqua ammonia in divided portions, shaking after each addition, then gradually add the turpentine, and lastly the gum camphor. The aqua ammonia must be U. S. P. Much of the ammonia is above or below the standard. This mixture will not separate.

The X-Rays in Epithelioma.—G. E. Pfahler, Philadelphia (Jour. A. M. A., Nov. 21), divides the epitheliomas, as regards their treatment by the Roentgen rays, into five classes: 1. Superficial epitheliomata of the exposed surfaces of the hands and face, which should yield practically 100 per cent of cures. They are usually small in area, of slow growth and comparatively painless. They will usually require ten or twelve treatments and from two or three months

for a cure; the results are more likely to be permanent than with any other treatment; If untreated there is a possibility of this form passing into the deep ulcerating type. 2. Superficial epitheliomata associated with senile keratosis also yield to the Roentgen rays very similarly to those of Class 1, but recurrences are much more probable. These patients also seem to have exposures at short intervals on account of the risk of dermatitis. 3. Pearly epitheliomata. These include a small group of cases in which there is a circle of pearl-like elevations forming a ridge and surrounding a central area much resembling healthy skin. The ridge spreads, often irregularly, while the centre heals. They are of slow growth and not very malignant, but they yield to treatment less readily than the other superficial forms. Best results will probably be obtained by protecting the soft center and treating the border strongly with a very soft tube. 4. Under the class of deep ulcerating epitheliomata. Pfahler groups those cases that involve the deeper tissues and present large ulcerating surfaces, with indurated edges and often with an indurated base. They may involve any part of the body and are at times associated with enlargement of neighboring lymphatic glands. They often consist of recurrences of superficial epitheliomata of Class 1 after treatment with caustics, curettement or excision. These cases do not yield readily to the rays and should be excised when possible. 5. Epitheliomata on mucous surfaces, including those on the lips and inner surface of the cheeks, the vagina and the penis. In these cases no time should be lost by X-ray treatment, but the growth should be excised at once, and this followed by a thorough course of treatment with the rays over the glandular area.

GOOD THINGS TO LEARN.—Learn to laugh. A good laugh may be better than medicine.

Learn how to tell a story. A well-told story is as welcome as a sunbeam in a sick-room.

Learn to keep your own troubles to yourself. The world is too busy to care for your ills and sorrows.

Learn to stop croaking. If you cannot see any good in this world, keep the bad to yourself.

Learn to attend strictly to your own business. Very important point.

Learn to hide your aches and pains under a pleasant smile. No one cares whether you have the earache, or rheumatism.

Learn to greet your friends with a smile. They carry too many frowns in their own hearts to be bothered with any of yours.

SOCIETY PROCEEDINGS

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Abstracts of papers read at the Thirty-fourth Annual Meeting, held at Louisville, Ky., October 13-15, 1908.

(Continued from page 561.)

SYMPOSIUM ON DISEASES OF THE PANCREAS.

Etiology and Pathogenesis of Pancreatitis.—Dr. William D. Haggard, Nashville, Tenn.: Gallstones are etiologically associated with pancreatitis in nearly one-half of the cases. Anatomic peculiarities and variations of the terminal pancreatic ducts are the determining factors in the occurrence of pancreatitis in some cases of gallstones and not in others. Lodgment of a stone in the ampulla of Vater temporarily or premanently (Opie) causes acute hemorrhagic pancreatitis. The chronic indurative or interstitial type is caused by stones lodged, resident, or escaping through the common duct. Bacterial invasion is secondary to some unphysiologic or mechanical internal injury. Infection of the pancreas by the lymphatics in cholecystitis is probably a more frequent avenue than by continuity. Gastroduodenitis appears to be responsible for about one-third of the cases. Catarrhal jaundice is probably caused by inflammatory swelling of the head of the pancreas, compressing the common duct of the liver, in many instances. Mumps causes about 10 per cent of the cases of pancreatitis, and other infections may likewise cause it by metastases. Fat necrosis with acute hemorrhagic pancreatitis is caused by injury of the gland cells, access of bile or enterokinase which activates the hemolytic property of pancreatic juice.

Diagnosis of Pancreatitis.—Dr. A J. Ochsner, Chicago: There is an area of tenderness on deep pressure over the upper portion of the right rectus abdominis muscle to the right of Robson's point in pancreatitis complicating cholecystitis. This area is not so circumscribed as Robson's point and corresponds nearly with the area of tenderness in duodenal ulcer. There should be continued, careful examination of the pancreas in all surgery of the upper portion of the abdominal cavity in order to obtain reliable statistics.

Dr. J. Henry Schroeder, Cincinnati, Ohio, discussed the physiology and chemical pathology of the pancreas in pancreatitis.

Pancreatic Diabetes and Its Relation to Gallstones.—Dr. Alfred C. Crofton, Chicago: The interrelationship existing between gall-

stones disease and pancreatic diabetes is important clinically, for three reasons: First, cases of persistent, usually very intractable, glycousria occur that run their course under the guise of an idiopathic diabetes mellitus, but are in a reality due to gallstone factors; second, cases occur which present all the essential clinical features of cholelithiasis, accompanied by continuous or intermittent glycosuria, are in reality cases of chronic pancreatitis and not of gallstone disease; third, because the two disorders occur together much more often than is generally assumed and produce a complicated disease picture that is confusing and commonly misinterpreted. The identification of a glycosuria as due to pancreatic diabetes is uncertain, because it implies the hazardous diagnosis of pancreatitis, which is especially difficult when gallstone disease complicates glycosuria. Pancreatic diabetes (glycosuria) is a much more common symptom in acute pancreatitis, and at the onset of pancreatic disease, especially when associated with cholelithiasis, than in later stages. In individuals with a diabetic heredity glycosuria is apt to occur in even slight pancreatic involvement, and occasionally administration of a diabetic test meal demonstrates reduced tolerance for carbohydrates.

In interpreting the occurrence together of pancreatic diabetes and gallstones, three possibilities are to be considered: (1) The gallstones may precede the pancreatitis; (2) the disorder about the pancreas may be the cause of the gallstone formation; (3) both the gallstones and the pancreatic diabetes may be due to some common cause acting simultaneously on the liver and the pancreas.

The medical treatment of pancreatic diabetes, especially when complicated with cholelithiasis, is unsatisfactory. Exploratory laparatomy in any suspicious case is almost invariably indicated.

Surgical Treatment of Pancreatitis.—Dr. W. J. Mayo, Rochester, Minn.: Immediate operation offers the best prospect of cure in acute hemorrhagic pancreatitis. While the mortality is exceedingly high, it is not prohibitive. If operated on early, a swollen pancreas will be found which should be incised in several situations, and free drainage furnished. Fat necrosis is not necessarily a fatal condition. I have operated on a number of such patients in the convalescent stage. Localized septic accumulations in the pancreas should be opened and drained.

Gallstones should be removed and biliary draniage furnished. The surgical treatment of subacute pancreatitis presents a more favorable field. The fundamental principle of surgical treatment of chronic pancreatitis consists in reliving the common duct of as much of its bile-carrying function as possible. In 62 per cent of cases jaundice will be present because the common duct runs through the head of the pancreas. In 38 per cent the common duct lies behind the pancreas, but will usually be found more or less dilated, often without jaundice, in all cases of chronic pancreatitis. In the majority of cases gallstones in the common duct, 84 per cent of patients will have a contracted gall bladder, the result of gallstone irritation. When the chronic pancreatitis is not the result of calculi, the gall bladder will usually be distended. Chronic pancreatitis when caused by gallstones will usually be cured by removal of the stone, cholecystenterostomy is indicated. The gall bladder has two important functions: First, the secretion of mucus, which renders the bile less irritating; second, the relief of tension in the common duct. Both tend to prevent pancreatic complications.

DISCUSSION.

Dr. G. W. McCaskey, Fort Wayne, Ind.: To American medicine is due the credit for the most important fundamental advances that have been made in connection with this subject. The relation of gallstone disease to pancreatitis has been clearly demonstrated, and we should remember that it is not necessary for a gallstone to reach the ampulla of Vater and block up its duodenal orifice in order to produce this disease. Anatomic studies have shown that in fully 6 per cent of cases of all individuals the common duct was more or less firmly embraced by the pancreas. It is obvious that a calculus in passing through the common duct in its intrapancreatic portion may press on the pancreatic duct, thus producing stasis of pancreatic secretion and leading secondarily to chronic pancreatitis.

Dr. W. H. Wathen, Louisville: It is a question whether pancreatitis is always the result of an infection ascending from the duodenum or through the blood, or whether it comes down secondarily from the gall bladder. The treatment, however, is practically the same, and that is drainage, the best method of which in the chronic forms of the disease is through the biliary ducts, either by cholecystostomy, which will cure many of these cases, whether there be gallstones or not, or by cholecystenterostomy, when complications do not contraindicate that procedure preferably with duodenum, next with the jejunum, as high up as is consistent with good surgery, and finally un

fortunately it has been made with the colon, where we lose all the digestive properties of the secretion. I should advocate in these cases operative procedure, drainage by cholecytostomy, or drainage by cholecystenterostomy into the duodenum or jejunum.

Dr. G. Dock, New Orleans, La.: It was pointed out some years ago, and has been noticed by many observers since then, that certain case of acute inflammation of the adrenals produced the same symptoms as acute pancreatitis, or as those which occur in acute irritation of the peritoneum. Lavenson has reported an interesting case in which a patient had chronic pancreatitis an acute hemorrhagic degeneration of the adrenals.

Dr. D. N. Eisendrath, Chicago: I wish to emphasize the frequency with which we have apparently primary pancreatitis. These cases are secondary to infections from the intestine, but are primary, so far as any gallstones are concerned, in the pancreas. We have been accustomed in the past to think of cases of persistent and intense jaundice as being due to malignant disease at the head of the pancreas or to stones in the common duct, or some similar condition obstructing the common duct. We have come to recognize that there is a so-called primary icterus which is due to inflammation of the pancreas, resulting in such proliferation of connective tissue around the orifice, or close to the orifice of the common duct into the duodenum, that there is persistent jaundice, and this jaundice will not be relieved by cholecystostomy. These are the cases in which a cholecystenterostomy or a cholecystjejunostomy is the only operation which will give relief, provided it is possible.

Dr. N. Rosewater, Cleveland: I had a case of chronic interstitial pancreatitis that came to autopsy several years ago. In this case we found a dozen gallstones. The patient was a woman of 63; she had never had icterus; she had no pain. There were no symptoms which would lead one to make a diagnosis of either gallstones or involvement of the pancreas. Only one of numerous consultants suggested malignant disease of the pancreas. I observed the patient for a considerable time. Suddenly she was taken with complete deafness. I attributed this to gastro-intestinal disturbance. I gave her a cathartic, but within a few hours she also developed a peculiar condition of the tongue. She could hardly utter a word, though there was not complete paralysis. She could stick the tongue out, but it would not go to either side. Consultants in the case were divided as to whether there was apoplexy or not. But this condition cleared up. No stomach pump was used on account of the fact that we are were dealing with possible apoplexy. The woman vomited; the contents of the stomach were examined and found to contain no gastric juice, so that we were dealing with an achylia. At autopsy we found a number of gallstones, chronic interstitial pancreatitis, and general arteriosclerosis.

Dr. J. H. Carstens, Detroit: Gallstones are not so frequent as ordinarily supposed. For the last few years I have examined every single patient on whom I have done laparotomy for gallstones, and of 500 operations I have found only 22 in which gallstones existed

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Medical Society of the Missouri Valley at St. Joseph.—Preparations are well under way for the spring meeting of this society, at St. Joseph, Thursday and Friday, March 18 and 19, 1909, under the presidency of Dr. C. B. Hardin, of Kansas City. Invitations have been sent to a number of men of national reputation, as well as to the presidents of all the State associations within the province of the society; already many applications have been received by the secretary for places on the program, and interest in the gathering is widespread. Dr. N. S. Davis of Chicago, will deliver the address in medicine. The St. Joseph-Buchanan Co. Medical Society has appointed the following general committee to take charge of all arrangements: Drs. Jacob Geiger (chairman), W. T. Elam, O. G. Gleaves, J. H. Sampson, Chas. Wood Fassett, Daniel Morton, O. B. Campbell, C. A. Good, T. E. Potter, J. M. Bell. A fraternal excursion to Sulphur Springs, Ark., is being arranged for the members and their ladies, leaving St. Joseph immediately after the second day's session. The profession cordially invited to attend. Those desiring to present papers must inform the secretary prior to February 1st. Short, practical papers from internists especially welcomed.

Chas. Wood Fassett, Secretary,
St. Joseph, Mo.

Spinach.—The value of spinach as an article of food is placed very high among the list of vegetables. Its non-fermenting properties will enable a person to use it when nearly all vegetables have to be proscribed. Its laxative nature is of special advantage to many people. This latter quality is said to be due to the abundance of mineral salts which it contains, chiefly those of iron and potassium.

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*American Medicine. (Bibliography omitted to save space.)

Physiological Philosophy.—That the stomach seems to do its work, does not always mean that the patient is receiving all the nourishment he can from his food. The absorption from the intestinal tract is of great importance, and this should be stimulated and aided in the same way that you stimulate and aid stomach digestion. It is here where the nucleo-enzymes play their part, for they are not destroyed by stomach digestion and enter the intestinal tract ready to aid. Peptenzyme fulfills this requirement for it contains the nucleo-enzymes of the salivary, peptic, pancreatic, splenic and intestinal glands and should be given not only in cases of indigestion, but where you desire the food to become better assimilated.

RENEW YOUR SUBSCRIPTION.—According to a recent ruling of the Post-office Department, no one is to be considered a subscriber to this magazine unless he shall sign a subscription blank, authorizing the publishers to continue same to his address. As we do not wish to send the FORTNIGHTLY to anyone not desiring same, we must again request that all subscribers wishing the journal, should fill out the blank found in this issue and return by early mail.

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The Constitution of Malt Liquors and their Influence Upon Digestion and Nutrition.—(An abstract of a paper read by Dr. J. J. Doleman, F. I. C., F. C. S., Before the Philosophical Society of Glasgow). A liquid resembling in appearance British Porter, and labeled Johann Hoff's Malt Extract, has been sent to us from Germany pretty freely during the last few years, Our esteemed President (Dr. Andrew Fergus) brought it under my notice about 12 months ago, and acquainted me with the fact of its having—in many cases coming under his own observation—proved of service in restoring the energies of individuals suffering from faulty nutrition. Suffering at that time from an attack of illness which had not only reduced my strength, but brought on extreme exhaustion from inability to appropriate food, I tried the effect of Hofl's Malt Extract, in the usual dose of a wineglassful twice or three times a day. Its use was followed by marked effects:—(1) Food which had hitherto been found to pass the alimentary canal unchanged, digested properly. (2) There appeared an increased power of evolving animal heat and storing up fat. Passing beyond my personal experience I have experimented with it in other directions, particularly upon thin, cold, and aged people, who are unanimous in attributing to the genuine liquid sustaining powers which are not commonly observed with alcoholic liquors. It was therefore with considerable interest that I undertook its examination. The word "malt extract" is, by common consent of chemists, applied to that portion of a malt liquor which either has not been fermented into alcohol, or which after fermentation has escaped conversion into alcohol. Further, malt extract is a solid, and is obtained by evaporating the liquids containing it to dryness. It will be seen, therefore, that Hoff's liquid is something more than "malt extract," for it contains besides this body, alcohol, and the usual quantity of carbonic acid gas, which causes any ordinary fermented liquor to froth when liberated from the bottles containing it. In fact, the presence of large quantities of carbonic acid gas in Hoff's liquor shows that its alcohol has been produced by internal fermentation. But, on the other hand, this liquid of Hoff's produces, on evaporation to dryness, an extract which differs from the solid extract usually obtained from British beers. Malt extract obtained from such sources contains a large percentage of crystallisable sugar, whilst that from Hoff's liquid is almost entirely constituted of the dark brown uncrystallisable extractive matter present. Starch constitutes 47.4 per cent. of wheaten bread, 58.4 per cent. of oatmeal, 18.8 per cent. of potatoes, 66.3 per cent, of wheaten flour, 79.1 per cent. of rice, and 82 per cent. of arrow root, so that the whole matter seems of sufficient importance to merit carfeul experiment. It is obvious that, if malt liquors exert a solvent action upon starch, the phenomena can be investigated external to the stomach, provided the necessary temperature and other conditions of the animal digestion be imitated. Such experiments have been conducted not alone with Hoff's liquid, but with ordinary beers and porters, as bought from neighboring public houses. I am indebted to the courtesy of Messrs. Bass & Co., Messrs. Allsopp & Co., Messrs. Truman, Hanbury & Co., and Messrs Bates & Co., for samples sent me direct from their respective breweries. Fifty grms. of bread were digested, at blood heat, with 200 C. C. of water made faintly alkaline with sodic hydrate. The total dissolved solids were then estimated after digestion for six hours at blood heat, and filtrations in the usual way. These experiments demonstrated, that, with twenty-four hours' digestion, 90 grms. of Hoff s liquid dissolved 50 per cent. of the starch of 30 grms. of bread, and that it requires four times as much of any of the others, to effect the same result. The total result is as follows, the figures being calculated to avoid decimals, and to show the amount of starch in the bread, which became soluble by the agency of the various liquors, the bread used in each case being of the same weight. The Burton Ale dissolved 5 per cent. of the starch, the London Porter dissolved 40 per cent. of the starch, the Wrexham Ale dissolved 26 per cent of the starch, the Genuine Hoff's Malt Extract dissolved 60 per cent. of the starch. The importance of an agent like Hoff's liquid upon the digestion and nutrition may be estimated, when it is considered that starch forms so large a proportion of the diet of man that in its natural state, or even when boiled, it is not soluble in the sense of being capable of absorption through a membrane (although it may become pasty or sticky) and that before it can be absorbed by the assimilative organs, it must become soluble.

SURGICAL SUGGESTIONS

(American Journal of Surgery.)

The Sensation of a foreign body in the eye may be provoked by the presence of a small tarsal tumor.

A Periostitis at the margin of the orbit may resemble a cellulitis. It is often of syphilitic origin.

It is Worth while bearing in mind that subcutaneous swellings are sometimes gummata.